00 Pr March 9th - #5

An

Inaugural Essay

on

Bilious Colic

By

James R Speer.

of

Pennsylvania.

admitted March 22d. 1821

Observations on the Bilious Colic, as it prevailed in Westmoreland County Penn.a in the years 1817-18-19-20.

This disease is never Epidemic. Sometimes however, it extends over a very considerable district of country. It is one of the autumnal diseases of the Southern States, of very frequent occurrence. Little has been said in relation to it, by medical writers. Indeed from the slight attention paid to it, we would be led to suppose, that it was a disease of comparatively rare occurrence, and mild, or at most, transient and manageable in its nature. Cullen and Sydenham appear to have seen it, only in its milder forms. Of this, the remedial course they recommended, is sufficient proof. The treatment of Cullen, would certainly be inadequate to the cure of the Bilious Colic of this country; that of Sydenham, is still more strikingly deficient, in point of activity and energy. He directs, in the first instance, a plentiful

bleeding from the arm; and in the course of four or five hours, an anodyne: on the next day, a gentle purgative; which is to be repeated, three or four times, with an interval of one day between each repetition.

The disease was scarcely known, in the western part of this State, and the country adjoining, until the latter part of the year 1817; when it became prevalent, involving considerable hepatic derangement, and febrile actions; often wearing the most violent, and threatening symptoms, and even sometimes ensuring death. Since that period, it has prevailed every year, more or less extensively. It may be proper to remark, that in that country, Intermittent fevers are almost unknown; and that Pleurisies, Rheumatisms, Dysenteries, and Bilious fevers, are the most common diseases. Since 1817, Dysenteries have prevailed much more extensively, than they had for many years before that period; and bilious

colic, contrary to its common laws, has not been seen till dysentery has disappeared; it has then set in, and continued through the winter months, and often through the spring.

Bilious Colic consists in an acute pain in the abdomen, vomiting of bilious matter, and obstinate costiveness; attended with more or less fever. Loss of appetite, nausea, chills, and fever, sometimes, appear before the other symptoms; but in general, a violent twisting, or lancinating pain under the umbilicus, is the first symptom. It seems, indeed, not to be surpassed in degree, by any suffering, to which the human frame is liable. The robust and the vigorous, are often prostrated, almost instantaneously by it. I have even heard the unfortunate sufferer, earnestly implore, to be dispatched at once, from life, and from torture. For some time at first, it remits for short intervals, and is not confined to one spot; but in a few hours

becomes more fixed, and permanent. It is relieved in some measure, at first by pressure; and it is therefore common, to find a patient, on visiting him, with his head and shoulders drawn forwards, by the violent spasmodic contraction of the abdominal muscles, and pressing forcibly on the abdomen with his hands.

Vomiting is an invariable and very distressing symptom, at the commencement of the disease; and as it appears to depend on a superabundance of bilious, or other vitiated matter in the stomach, or on the constriction of the intestine, it will continue until these are either altogether, or in some measure altered, or removed. It sometimes happens that after the contents of the stomach are entirely evacuated, it is relieved, and vomiting ceases, long before the spasm of the intestines has given way.

The pulse is full, hard, and frequent; differing in this respect from that of most inflammatory affections of the alimentary canal. In these, generally, it is small, hard, and corded. In some cases, it was of the opposed character; not being so full, and frequent, and imparting a struggling sensation to the fingers, and always rising after blood letting.

The tongue is usually foul, and presents the yellow, furred appearance, common in bilious complaints. I saw it, in one case of uncommon severity, covered over in a few hours after the pain in the abdomen, which was the first symptom, with a great number of small distinct black spots. I have not seen, or heard of the same symptom, in any other case.

In some cases, there was frequent involuntary sighing, and great anxiety, with severe pain in the breast, particularly, under the sternum. These symptoms, as well as the immediate discharge of

bile, by vomiting, the dull pain in the right hypochondriac region, and high coloured urine, indicated that the disease was seated high up in the intestine; and that there was considerable derangement of the liver. This derangement may have consisted, merely in an engorgement of its vessels, occasioning either an increase, or a total suspension of its natural secretion; as well as interrupting the free, and easy motions of the diaphragm, from its increased size, and weight. That the affection was not of a very permanent nature, was proved by the return to the healthy exercise of its functions, immediately after the more violent symptoms of colic were ~~been~~ removed.

In other cases, there was great difficulty in passing the urine, and sometimes a total suppression. Sometimes, there was an acute pain in the region of the pubis, extending up the abdomen, and sometimes in the testicles. These latter symptoms, though often severe, were alway transient;

and indicated, that the disease was seated low down in the intestine, and was not difficult to remove.

Costiveness is an invariable attendant on the disease. It is indeed that symptom to which our remedies are chiefly to be directed; and which, when overcome, leaves the complaint divested of all its terrors, and its dangers. It sometimes comes on gradually, an unusual torpidity of the bowels, having existed for some days previous to the attack. At others a bilious diarrhoea of that continuance, is the precursor. When a passage is obtained through the bowels, scybala are generally discharged, with large quantities of bilious matter, of a dark, green, or yellow colour, and fœtid smell. In one case a tube, from three to five inches in length, was voided, resembling according to the discription of the patient, a piece of intestine. As pain and inflammatory symptoms had been very high in this case,

an intussusception had probably occurred, which occasioned the sloughing of the confined portion, or it may have been a coat of coagulable lymph thrown off, as in other diseases by excessive inflammation. The patient, however, recovered.

Spasm of the extremities sometimes occurred. In one case, the muscles of the extremities, were most violently contracted; and I have heard of the same symptom occurring in other cases.

Disordered vision, or total blindness, is said to have attended the disease frequently, but neither have occurred within my experience.

Very young people appear entirely exempt from bilious colic. In 60 or 70 cases, the subjects of these observations, none were under the age of 24. Above that period, every age appeared liable to it, though it probably occurred most frequently, between the ages of 24 and 45. Another peculiarity is, that its victims are with few exceptions, persons of the most vigorous, and

healthy constitutions. It may not be an easy matter to account for this, but as a medical fact, it is worthy of notice, and may lead to some useful speculations. It seems probable, however, from some cause or another, that the intestine is only capable in such persons, of taking on the violent, and spasmodic action, in which the disease consists.

The predisposing causes of Bilious colic, are the same as those that produce bilious, and intermittent fevers, and dysenteries.
There appears to be a very intimate connexion between this disease, and dysentery. They are both dependant on the same predisposing cause, and both of a febrile character, with local determination to the bowels. Perhaps, they may both be considered different forms of the same morbid action; the system being determined to assume the one, or the other, according as it is in a vigorous, or a debilitated state, at the time of

the attack. We find that a high degree of vigour, is necessary to the production of bilious colic; therefore, during the autumn, when the system has been reduced, and relaxed by the heat of the preceding season, and by the operation of the predisposing cause in its full force, bilious colic will not be the product, but dysentery; and, when the system has recovered its tone by the bracing and invigorating breezes of winter, an application of the exciting causes, will produce bilious colic. If this view of the subject be correct, bilious colic may be considered a pent up dysentery, and dysentery, an open, or unconfined colic. If it be objected to this opinion, that bilious colic has often prevailed in the same districts, and during the same seasons with dysentery, it may be answered, that an infinite variety of circumstances, may have concurred, to produce in different persons, these different states of the system, which I have supposed necessary to the production of the one, or the other.

Another proof of this position, may be drawn from the nature of the exciting causes, of the two diseases. The predisposing state of the atmosphere, is generally so powerful as to require little, or no aid, from exciting causes to produce dysentery. In many cases, it comes on when there has been no exposure, and no irregularity, on the part of the patient, whatever; but in the production of dysentery, the system being in a much less degree under the influence of the predisposing cause, a proportional increase of power, is required in the exciting causes. And accordingly, we find them of this description. Among the most frequent, is uncommon exposure to cold, and moisture; applied to the system generally, but particularly to the feet. A large proportion of the cases which I saw, were owing to this cause. I have known it come on, from taking a large draught of beer, immediately after rising out of bed in the morning. In many instances it was produced, late in the fall by using apple=

butter, which had stood for some time in the copper vessels, in which it had been made. The subacetate of copper formed in these cases, was the active and deleterious article.

Dr Huxham supposed the Devonshire Colic, which, in many of its first symptoms, very much resembled bilious colic, to be produced by eating apples; of which there was a great abundance, during the years in which it prevailed. Both apples, and cider of an inferior quality, or when taken to excess, no doubt often become the exciting causes of bilious colic. Many of the cases which fell under my observation, were clearly traced to drinking cold and sour cider.

As to the proximate cause of this disease, there is a general concurrence in the opinion, that it consists in a spasmodic constriction of some part of the intestinal canal, and most commonly of the colon. This is satisfactorily established, as well by the symptoms of the complaint, as by dissections after death.

Notwithstanding Bilious Colic is a disease that wears so menacing an aspect, appearing to involve so much danger to the patient, and so much difficulty to the practitioner; there is none, perhaps, over which the resources of our art can afford a more prompt and striking controul, and none, in which the active, persevering, and skillful use of our remedies, will more certainly ensure a rich reward of those pleasurable feelings, that are ever attendant on successful efforts to relieve the sufferings of our fellow beings.

All the symptoms of the complaint, point to one simple and single indication: which is to remove the constriction of the intestine.

With this view, venesection should first be performed. 320 or 30 of blood should be drawn at once; and the operation repeated as often, as the violence of the symptoms may require. In many of the cases I have seen, it was necessary to extract 360 or 70 in the course of 24 hours.

The lancet is here an invaluable remedy; and fulfils many primary intentions. It is, in short, our best anodyne; relieving pain more effectually, and more safely, than opiates:- our best antiemetic; calming and allaying the irritability of the stomach; and our best antispasmodic: while at the same time, it subdues inflammatory action of the system generally, and more particularly of that part of the intestine, involved in the spasm. When venesection has not been freely practised, fever is apt to supervene after the obstruction is removed, inflammation of the intestine sometimes comes on, and the death of the patient is the consequence.

The warm bath is next to be used, as a powerful auxiliary in fulfilling almost all the intentions that are answered by blood-letting. Where the symptoms are very urgent, and severe; the patient may first be placed in the warm bath, and then bled, ad deliquium animi. From this simultaneous use of these two active remedies, the happiest effects are generally experienced. If, however,

after being taken out of the bath, vomiting be not sufficiently subdued, to admit the administration of medicines by the mouth; an emetic may be given, to remove more effectually, any foul, or bilious matter, which may keep up the irritation. If it still continue; recourse must be had to the usual antiemetic remedies, with the exception of opium, which according to my experience, had better be omitted. The effervescing draught, and lime water and milk, may be tried, fomentations applied to the pit of the stomach, and sinapisms to the extremities. If these fail, a large blister may be applied upon the abdomen, which will be alike calculated to fulfil this intention, and to divert inflammation from the contracted intestine. By these measures the stomach will generally be composed, or wearied at length, by its own excessive action, it will sink into repose, and give an opportunity for the administration of cathartic medicines.

Of these, the most powerful should at once

be resorted to. Those of the milder class, will be entirely inadequate. Preference should also be given to such as pass through the stomach with the least irritation to that organ, and act principally on the large intestines. And fortunately, some of the most active cathartics, are of this character; as calomel, aloes, and gamboge. Large doses of calomel either in powder, or pills, will sometimes answer very well. It may be given in doses of 15, 20, or 30 grains every 4 hours, ~~or alternately~~ or alternated every 2 hours with ol. ricini ℥i. The sulphat of Soda I have generally found to be rejected from the stomach, and to increase vomiting. The sulphat of magnesia, is sometimes of service. Many practitioners have derived great advantage from combinations of calomel, and opium, in large doses, as 2 or 3 grs of opium, to 10, 15, or 20 grs of calomel. Used in this way, it has been supposed that a double effect was obtained; the opium overcoming the spasm, and the calomel operating as a purgative. Having been taught by my

preceptor, to depend principally on venesection in this disease, as an antispasmodic; and to dread the well known constipating, and inflammatory effects of opium, in the commencement of all diseases of an inflammatory character, I have tried this combination in but few cases; in these it was not attended with a relaxation of the spasm, the calomel was detained in the intestines three, or four days; and extreme salivation, and soreness of the mouth was the consequence. In one case, I feared I should lose my patient, from the violence of the mercurial symptoms that followed. Its use was therefore, almost entirely avoided, until after the spasm was removed. When it was given before that was effected, either to relieve pain, or to suppress obstinate vomiting, it was administered by the rectum.

The combination of calomel with aloes, and gamboge, forms one of the most prompt and certain cathartics we possess; and according to my experience, one better calculated to remove the obstruction in bilious

colic. I have found it so efficacious, alternated with an infusion of fol. sen, crem. tart, and manna, as to cure it in most cases that have fallen under my care. The following is the formula of each:
℞. Calomel, & Gum Aloes aa ʒi, Gum Gamboge grs XII sacch. q. s. m. f. pillul XII.
℞. Fol Sen, & Mannae aa ℥ss, Crem Tart, ℥iss, aqua bullientis, ℔i. f. infusum. After standing 15 minutes, it will be fit for use. One of the pills is to be given every 4 hours, and 2 hours after each pill; ℥iv of the infusion. By the time the infusion is all used, if the preceding measures have been vigorously pursued, the bowels will in many cases be moved; if they should not, the same course is to be patiently, and perseveringly continued. It may also be necessary to repeat the bleeding, and the warm bath, and if a blister has not been applied to arrest vomiting, a large one should now be laid over the abdomen, extending across the right hypochondriac region, with a view both to its effect on the liver, and the prevention of inflammation in the intestine.

Enemata are highly necessary throughout the whole process of the cure, and though they very often disappoint our expectations; in many cases they will afford prompt, and immediate relief. Much advantage however, is not to be expected from them, unless when used at the same time with active cathartics. The mildest should first be tried. The following will be found very useful. R. Axungiae porcinae, Sacchari, et Muriatis sodae aa ℥ss aquae fervidae ℔i. The whole of this should be thrown up at once. If more activity is required, ol. ricini sulphas sodae, senna, jalap, and other active medicines may be substituted in place of the above ingredients. The turpentine injection will often be successful. The tart emet and tobacco injections are no doubt more powerfull than any that have been mentioned, and in cases of very great obstinacy should be resorted to. I have never used them; having always been able to move the bowels by some of the remedies above enumerated.

Soreness of the mouth from the calomel that has been taken, generally occurs about the time of the removal of the obstruction. This happens in so many instances, that a relation seems to exist between the one, and the other, very nearly allied to that of cause, and effect. It is therefore a circumstance not to be deprecated, but to be wished for, as well on this account, as for the beneficial influence it exercises on the liver. Accordingly, soreness of the mouth, may be looked upon as a certain indication that the spasm is about to yield, and that a natural, and healthy flow of bile will be established.

After, however, we have conquered the disease, and rescued our patient from suffering; the greatest caution will be necessary to prevent relapses. It is a most insidious enemy, and will recur often, after the patient is apparently, wholly relieved. This is probably owing to the irritation of recumulated bile, poured into the yet tender intestine.

In three fourths of the cases I have seen, relapses took place; and in some of them, two, three, and four times. They will invariably follow any considerable degree of exposure. Errors in diet, and clothing, are a frequent cause. I have known a relapse to follow, from the patient having been out in a slight shower of rain; from sitting a short time on the cold ground; from walking with bare feet on a cold floor; from taking a draught of cold beer, or cold water; and many other causes of the same nature.

It was, therefore, considered necessary, in most cases, to continue purgative medicines for three or four days, giving an anodyne pill at bed time; after which some tonic preparation should be directed, for the purpose of restoring strength to the debilitated intestine. The following will be found to answer that purpose very well.

℞ Gentian, Valerian, Serpentaria Virginiana aa ℥ss Carb Potash, ʒii ℞ad Rhei ʒiii, aqua bullientis ℥xii coch j o. ʒa h. per decem.

The following case illustrates the nature of this disease, and the success of the treatment recommended in this essay.

W. B. About 45 years of age, previously healthy, had been exposed to much fatigue, and night air, with his feet and legs, cold and damp. He had been ten days ill without any alvine evacuation, complaining at first of listlessness, soreness of the bones, slight head ache, and deficient appetite: afterwards of severe pain about the umbilicus, and violent vomiting, which continued for two, or three days. He had been bled sparingly, and taken two doses of purging medicine, and ℥x of crude mercury, with many injections. The pulse was full, and firm; the pain across the umbilicus was excruciating, extending to the right hypochondriac region, with a sense of weight, and uneasiness in the sternum. Thirty ounces of blood were immediately taken, and a tea cup-full of the infusion of Sen, Cream tart, and manna, directed every 3 hours, with a pill of calomel

aloes, and gamboge, 1½ hour after each dose of the infusion. This was ordered at 12 o'clock in the day; at bed time, no relief was experienced. Twenty six ounces of blood were drawn while the patient was in a warm bath; deliquium ensued; he was taken out, and had a small passage from the bowels, containing a few drops of the mercury. The patient was put to bed, and a large blister applied across the abdomen, and 30 grs of calomel administered; frequent injections were also given. In the morning, things remained as at bed time. The patient took ℥iv of castor oil. After a few hours, relief not being obtained, he was placed in the warm bath, up to the arm pits; a vein opened, and twenty ounces of blood drawn; when deliquium again ensued. During this, complete relaxation of the sphincter took place, and shortly afterwards, a passage of hard excrement, with loose matter of a dark green color offensive to the smell, and mixed with the mercury. During the day, the stools

were copious, offensive, and dark brown, occasionally mixed with green matter. Purgative medicines were directed for a few days, and afterwards a tonic preparation. The patient speedily recovered, with a slight intermission, occasioned by an intemperate indulgence in improper food.

D. Physick